

A detailed listing of all claims in the application is presented below. This listing of claims will replace all prior versions, and listings, of claims in the application. All claims being currently amended are submitted with markings to indicate the changes that have been made relative to immediate prior version of the claims. The changes in any amended claim are being shown by strikethrough (for deleted matter) or underlined (for added matter).

1. (Previously amended) A genetically engineered plant, or portion thereof, comprising a recombinant nucleic acid that encodes an enzyme in a plant Vitamin C biosynthesis pathway, wherein said enzyme is selected from the group consisting of phosphoglucose isomerase, phosphomannomutase, GDP-mannose pyrophosphorylase, and GDP-D-mannose-3,5-epimerase.
2. (Currently amended) The genetically engineered plant of claim 1, wherein said plant, or portion thereof, is a dicot.
3. (Currently amended) The genetically engineered plant of claim 1, wherein said genetically engineered plant is *Arabidopsis thaliana*.
4. (Currently amended) The genetically engineered plant, or portion thereof, of claim 1, wherein said nucleic acid comprises a polynucleotide that encodes GDP-mannose pyrophosphorylase.
5. (Currently amended) The genetically engineered plant of claim 1, wherein said genetically engineered plant, or portion thereof, expresses said recombinant nucleic acid.
6. (Currently amended) The genetically engineered plant of claim 1, wherein said genetically engineered plant, or portion thereof, produces increased levels of Vitamin C₂ relative to a progenitor plant from which said genetically engineered plant is derived.
7. (Currently amended) The genetically engineered plant of claim 1, wherein said genetically engineered plant, or portion thereof, has increased resistance to environmental stress compared to a plant of the same species without said recombinant nucleic acid₂ wherein said environmental stress is selected from the group consisting of drought, cold, UV radiation, air pollution, salts, heavy metals and reactive oxygen species.

8. (Currently amended) The genetically engineered plant of claim 1, wherein said genetically engineered plant, or portion thereof, is edible.
9. (Original) A genetically engineered plant, or portion thereof, comprising a recombinant nucleic acid that encodes GDP-mannose pyrophosphorylase.
10. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant, or portion thereof, is a dicot.
11. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant is *Arabidopsis thaliana*.
12. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant, or portion thereof, expresses said recombinant nucleic acid.
13. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant, or portion thereof, produces increased levels of Vitamin C₂ relative to a progenitor plant from which said genetically engineered plant is derived.
14. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant, or portion thereof, has increased resistance to environmental stress compared to a plant of the same species without said recombinant nucleic acid, wherein said environmental stress is selected from the group consisting of drought, cold, UV radiation, air pollution, salts, heavy metals and reactive oxygen species.
15. (Currently amended) The genetically engineered plant of claim 9, wherein said genetically engineered plant, or portion thereof, is edible.
16. (Previously amended) A method of increasing the level of Vitamin C produced in a plant, or portion thereof, comprising the step of:

engineering said plant, or portion thereof, to express a recombinant nucleic acid that encodes an enzyme in a plant Vitamin C biosynthesis pathway, wherein said enzyme is selected from the group consisting of phosphoglucose isomerase,

phosphomannomutase, GDP-mannose pyrophosphorylase, and GDP-D-mannose-3,5-epimerase.

17. (Currently amended) The method of claim 16, wherein said enzyme is GDP-mannose pyrophosphorylase.
18. (Currently amended) The method of claim 16, wherein said plant, or portion thereof, is a dicot.
19. (Currently amended) The method of claim 16, wherein said plant is *Arabidopsis thaliana*.
20. (Currently amended) The method of claim 16, wherein said plant, or portion thereof, has increased antioxidation capacity, relative to a progenitor plant from which said ~~genetically engineered~~ plant is derived.
21. (Currently amended) The method of claim 16, wherein said plant, or portion thereof, has increased resistance to environmental stress compared to a plant of the same species without said recombinant nucleic acid, wherein said environmental stress is selected from the group consisting of drought, cold, UV radiation, air pollution, salts, heavy metals and reactive oxygen species.
22. (Currently amended) The method of claim 16, wherein said ~~method produces a plant, or portion thereof, which~~ is edible.
23. (Cancelled)
24. (Currently amended) The genetically engineered plant of claim 4, wherein said polynucleotide comprises ~~GenBank accession number T46645~~ SEQ ID NO:6.
25. (Currently amended) The genetically engineered plant of claim 9, wherein said nucleic acid comprises ~~GenBank accession number T46645~~ SEQ ID NO:6.
26. (Currently amended) The method of claim 17, wherein said nucleic acid comprises ~~GenBank accession number T46645~~ SEQ ID NO:6.